

Shape-memory composite material - comprises woven filaments of shape-memory alloy, resin, etc., opt. in cylindrical form, opt. of different shapes and shape-recovering temps.

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Abstract (Basic): JP 3059142 A

A composite material (I) is composed of woven filaments of (II) shape-memory alloy, resin, etc.. The material can be formed into a cylindrical form. (II) can be plural one having different memorised shapes and shape recovering temps..

Each shape memory filament (II) can be conventional one, e.g., Ni-Ti (temp. range of recovering shape is 30-120 deg.C), Ni-Ti-Co (that temp. is -30 to 30 deg.C), Cu-Zn-Al (that temp. is -100 to 100 deg.C) as the alloy, and polynorbornene, styrene/butadiene copolymer, polyurethane etc. as the resin.

USE/ADVANTAGE - Shape memory composite material capable of easily memorising three-dimensional shape, which can be used for, e.g., driving unit for operating relief-, or direction changing valve in pipeline of a high temp. fluid, can be produced, the function of the material is brought from the differently shape memorised filaments, and weaving them. (7pp Dwg.No.0/8)

Derwent Class: A94; F03; M26; M29; Q55

International Patent Class (Additional): C22C-019/03; D03D-003/02; D03D-015/00; F03G-007/06